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The Administrator may make grants to one or more colleges or universities to establish and operate several regional centers of air transportation excellence, whose locations shall be geographically equitable. The responsibilities of each regional center shall include, but not be limited to, the conduct of research concerning airspace and airport planning and design, the air transportation environment, aviation safety and security, the supply of trained air transportation personnel including pilots and mechanics, and other aviation issues pertinent to developing and maintaining a safe and efficient air transportation system. … each center may make contracts with nonprofit research organizations and other appropriate persons. …
Selection Criteria
Public Law 101-508

- The extent to which the needs of the State in which the applicant is located are representative of the needs of the region for improved air transportation services and facilities.

- The demonstrated research and extension resources available to the applicant to carry out this section.

- The ability of the applicant to provide leadership in making national and regional contributions to the solution of both long-range and immediate air transportation problems.

- The extent to which the applicant has an established air transportation program.

- The demonstrated ability of the applicant to disseminate results of air transportation research and educational programs through a statewide or regionwide continuing education program.

- The projects the applicant proposes to carry out under the grant.
FAA Established COE Partnerships & Topics

* General Aviation – June 2012

Commercial Space Transportation (CST) - 2010

Research in the Intermodal Transport Environment (ACER/RITE) - 2004

Advanced Materials (JAMS) - 2004

Aircraft Noise & Aviation Emissions Mitigation (PARTNER) - 2003

General Aviation (CGAR) – 2001 to 2013

Airport Technology (CEAT) – 1995 to 2013

* Airworthiness Assurance (AACE) – 1997 to 2007

Operations Research (NEXTOR) – 1996 to Present

* Joint Center for Computational Modeling of Aircraft Structures – 1992 to 1996
FAA COE GEOGRAPHIC DISTRIBUTION

AIRCABIN ENVIRONMENT - INTERMODAL RESEARCH
Auburn Un.-Admin Lead
Harvard Un.
Purdue Un.
Boise State Un.
Kansas State Un.
Un. of Med & Dentistry of NJ

GENERAL AVIATION
Embry Riddle Aeronautical Un. -Lead
Un. of Alaska
Un. of North Dakota
Wichita State

AIRPORT TECHNOLOGY
Un. of Illinois
RPI

ADVANCED MATERIALS
Un. of Washington – Co-Lead
Wichita State Un.-Co-Lead
Edmonds Community College
Florida Internal Un.
Northwestern Un.
Purdue Un.
Oregon State Un.
Tuskegee Un.
Un. of California at LA
Un. of Delaware
Un. of Utah
Washington State Un.

COMMERCIAL SPACE TRANSPORTATION
New Mexico State Un.-Admin Lead
Stanford Un.
Florida Institute of Technology
New Mexico Inst of Mining & Technology
Florida State Un.
Un. of Florida
Un. of Central Florida
Un. of Colorado at Boulder
Un. of Texas Medical Branch

AIRLINER CABIN ENVIRONMENT - INTERMODAL RESEARCH
UC-B, MIT, UMD, VPI, Geo Mason

AIRWORTHINESS ASSURANCE
31 Equal University Partners

OPERATIONS RESEARCH

NOISE AND EMISSIONS MITIGATION
MIT – Lead
Boston Un.
Georgia Tech
Harvard Un.
Penn State Un.
Purdue Un.
Stanford
Un. of Illinois
Un. of Missouri-Rolla
Un. of Pennsylvania
Un. of North Carolina-Chapel Hill

GENERAL AVIATION 2012
TBD

Centers of Excellence
April 5, 2012

Federal Aviation Administration
COE Coordination & Oversight

1) **FAA COE Program Director / Grants Officer**
   FAA Sponsoring Organization

   **FAA & University Offices**
   Public Affairs – Gov’t Affairs
   & Grants Officers

   **FAA COE Program Manager(s)**
   2) **FAA Technical Monitor(s)**

   **COE University Directors / Leads**
   University PIs

   **Add’l Internal Advisors: Dept of Transportation**
   Office of Acquisition & Grants Management
Responsibilities - FAA

• The FAA COE Program Officer
  • Conducts competitive selection process
  • Establishes COEs and provides overall non-technical oversight
  • Reassesses COE management, projects, and progress
  • Represents the COE Program for the FAA
  • Serves as Grants Officer
    • Negotiates cooperative agreements
    • Awards funding, audits matching contributions

• The FAA sponsoring organization
  • Commits funding - 10 years
    • Grants
    • Contracts
  • Assigns COE Program Manager - overall direction
  • Assigns Task Monitors
    • Oversee technical progress
    • Evaluate new projects
Responsibilities – Members & Affiliates

• **The University Members –**
  - Form teams of COE subject matter experts
    - Submit proposals, conduct research, tech transfer, outreach, and related activities
    - Assign faculty / students to projects
    - Obtain matching contributions
    - Provide leadership in the field, serve on committees, report to Congress
    - Meet quarterly during first year, semi-annually thereafter
    - Host meetings to enhance partnership opportunities

• **Private and Other Public Entities**
  - Serve on COE Advisory Boards, committees
  - Sponsor and/or conduct joint research efforts
  - Provide matching contributions in accordance with gov’t guidance:
    - Labor
    - Materials
    - Lab space
    - Host meetings
    - Cash, etc.
Evaluation Processes

COE projects and progress are reassessed every three years
- Audit of matching funds and expenditures
- Letters to members, etc. regarding COE performance
- FAA reviews input, determines future direction
- Discussions regarding changes
- Close-out previous phase
- Negotiate new Cooperative Agreements
- Review status of self-sufficiency plans and define future direction

+ Ten-year evaluation
- Showcase research results
- Audit matching contributions
- Review progress, status of self-sufficiency plans
- Transition period, identify students/projects
- Determine future direction
10-Year COE Evaluation

• FAA COE Program Director and Center Program Manager review:
  • Initial justification to establish the COE
  • Final Solicitation
  • Winning Proposal

• COE schedules 10-yr symposium/showcase to highlight research results – set date

• COE PD seeks input regarding performance
  • Send letters to members
  • Send letters to affiliates

• COE PD prepares report. Advise senior management:
  • Results/Issues/Benefits of COE
    • Determine costs to manage Center and matching provided
    • Audit matching funds
    • Organizational changes impacting future direction

• Sponsor identifies FAA future technical needs

• COE PD announces results of evaluation, advises AOA-1

• If need continues for COE in the topic area, prepare request for AOA concurrence. Sponsor
  • justifies need and anticipated funding
  • defines new tech requirements, role of Center, other changes

  COE PD requests concurrence of senior management and AOA-1
• COE briefs FAA senior management

• The Evaluation Team considers the extent to which:
  • The criteria that led to the initial selection have changed over the life of the COE
  • The COE has been responsive to FAA research and other needs
  • The current team is able to support future research requirements
  • The COE has demonstrated technical quality and usability of research products via technology transfer
  • The Center has been inclusive of underrepresented groups and conducted outreach efforts
  • The current team members have demonstrated an ability to adequately generate matching contributions and outside research support
History

• Total FAA Contribution:

• Projects Completed and On-going:

• Total Matching Contributions:
  Breakdown of Sources / Contributions
Sample Project Report

Objectives

Tech Monitor:
PI:
Status:
FY-0X Funds Awarded:

Research Products
Final Report (Date)
# Technical Papers published
Conclusions applicable to FAA XXX Procedures

FAA Funding by FY

Centers of Excellence
April 5, 2012
Academic Outcomes

• Number of Ph.D. Dissertations:

• Number of M.S. level Theses:

• Number of COE Technical Reports and Publications:
  • List -

• Presentations, etc:
  • Insert Here
Financial Status Summary

• Funding provided through FAA Grants: $___________

• FAA COE grants matched:
  • Student salaries:
  • In-kind and cash contributions:
    – Amounts
    – Sources

COE administrated by Program Offices located at the University of Washington and Wichita State University

• Total administrative costs at each: $75K per year $__________________
FAA CENTERS OF EXCELLENCE

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